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SEQUENCE LISTING

TECH CENTER 1600/2900

<110> Max-Planck-Gesellschaft e.V.

a1 <120> Protein expression and structure solution using specific fusion vectors

<130> ST010209-EPA

<140> 01100762.2

<141> 2001-01-12

<160> 3

<170> PatentIn Ver. 2.1

<210> 1

<211> 765

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Partial myosin sequence of Dictyostelium; Component (1) of the recombinant protein M761-2R R238E

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Lys Tyr Leu Lys Val Lys Gln Gly Asp Ser Asp Leu Phe Lys Leu Thr
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Val Ser Asp Lys Arg Tyr Ile Trp Tyr Asn Pro Asp Pro Lys Glu Arg
35 40 45

Asp Ser Tyr Glu Cys Gly Glu Ile Val Ser Glu Thr Ser Asp Ser Phe
50 55 60

Thr Phe Lys Thr Val Asp Gly Gln Asp Arg Gln Val Lys Lys Asp Asp
65 70 75 80

Ala Asn Gln Arg Asn Pro Ile Lys Phe Asp Gly Val Glu Asp Met Ser
85 90 95

Glu Leu Ser Tyr Leu Asn Glu Pro Ala Val Phe His Asn Leu Arg Val
100 105 110

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Arg Tyr Asn Gln Asp Leu Ile Tyr Thr Tyr Ser Gly Leu Phe Leu Val
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Ala Val Asn Pro Phe Lys Arg Ile Pro Ile Tyr Thr Gln Glu Met Val
130 135 140

Asp Ile Phe Lys Gly Arg Arg Arg Asn Glu Val Ala Pro His Ile Phe
145 150 155 160

Ala Ile Ser Asp Val Ala Tyr Arg Ser Met Leu Asp Asp Arg Gln Asn
165 170 175

Gln Ser Leu Leu Ile Thr Gly Glu Ser Gly Ala Gly Lys Thr Glu Asn
180 185 190

Thr Lys Lys Val Ile Gln Tyr Leu Ala Ser Val Ala Gly Arg Asn Gln
195 200 205

Ala Asn Gly Ser Gly Val Leu Glu Gln Gln Ile Leu Gln Ala Asn Pro
210 215 220

Ile Leu Glu Ala Phe Gly Asn Ala Lys Thr Thr Arg Asn Asn Asn Ser
225 230 235 240

Ser Arg Phe Gly Lys Phe Ile Glu Ile Gln Phe Asn Ser Ala Gly Phe
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Ile Ser Gly Ala Ser Ile Gln Ser Tyr Leu Leu Glu Lys Ser Arg Val
260 265 270

Val Phe Gln Ser Glu Thr Glu Arg Asn Tyr His Ile Phe Tyr Gln Leu
275 280 285

Leu Ala Gly Ala Thr Ala Glu Glu Lys Lys Ala Leu His Leu Ala Gly
290 295 300

Pro Glu Ser Phe Asn Tyr Leu Asn Gln Ser Gly Cys Val Asp Ile Lys
305 310 315 320

Gly Val Ser Asp Ser Glu Glu Phe Lys Ile Thr Arg Gln Ala Met Asp
325 330 335

Ile Val Gly Phe Ser Gln Glu Glu Gln Met Ser Ile Phe Lys Ile Ile
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Ala Gly Ile Leu His Leu Gly Asn Ile Lys Phe Glu Lys Gly Ala Gly
355 360 365

Glu Gly Ala Val Leu Lys Asp Lys Thr Ala Leu Asn Ala Ala Ser Thr
 370 375 380

Val Phe Gly Val Asn Pro Ser Val Leu Glu Lys Ala Leu Met Glu Pro
 385 390 395 400

Arg Ile Leu Ala Gly Arg Asp Leu Val Ala Gln His Leu Asn Val Glu
 405 410 415

Lys Ser Ser Ser Ser Arg Asp Ala Leu Val Lys Ala Leu Tyr Gly Arg
 420 425 430

Leu Phe Leu Trp Leu Val Lys Lys Ile Asn Asn Val Leu Cys Gln Glu
 435 440 445

Arg Lys Ala Tyr Phe Ile Gly Val Leu Asp Ile Ser Gly Phe Glu Ile
 450 455 460

Phe Lys Val Asn Ser Phe Glu Gln Leu Cys Ile Asn Tyr Thr Asn Glu
 465 470 475 480

Lys Leu Gln Gln Phe Phe Asn His His Met Phe Lys Leu Glu Gln Glu
 485 490 495

Glu Tyr Leu Lys Glu Lys Ile Asn Trp Thr Phe Ile Asp Phe Gly Leu
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Asp Ser Gln Ala Thr Ile Asp Leu Ile Asp Gly Arg Gln Pro Pro Gly
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Ile Leu Ala Leu Leu Asp Glu Gln Ser Val Phe Pro Asn Ala Thr Asp
 530 535 540

Asn Thr Leu Ile Thr Lys Leu His Ser His Phe Ser Lys Lys Asn Ala
 545 550 555 560

Lys Tyr Glu Glu Pro Arg Phe Ser Lys Thr Glu Phe Gly Val Thr His
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 580 585 590

Lys Asp Pro Leu Gln Gln Asp Leu Glu Leu Cys Phe Lys Asp Ser Ser
 595 600 605

Asp Asn Val Val Thr Lys Leu Phe Asn Asp Pro Asn Ile Ala Ser Arg
 610 615 620

Ala Lys Lys Gly Ala Asn Phe Ile Thr Val Ala Ala Gln Tyr Lys Glu
625 630 635 640

Gln Leu Ala Ser Leu Met Ala Thr Leu Glu Thr Thr Asn Pro His Phe
645 650 655

Val Arg Cys Ile Ile Pro Asn Asn Lys Gln Leu Pro Ala Lys Leu Glu
660 665 670

Asp Lys Val Val Leu Asp Gln Leu Arg Cys Asn Gly Val Leu Glu Gly
675 680 685

Ile Arg Ile Thr Arg Lys Gly Phe Pro Asn Arg Ile Ile Tyr Ala Asp
690 695 700

Phe Val Lys Arg Tyr Tyr Leu Leu Ala Pro Asn Val Pro Arg Asp Ala
705 710 715 720

Glu Asp Ser Gln Lys Ala Thr Asp Ala Val Leu Lys His Leu Asn Ile
725 730 735

Asp Pro Glu Gln Tyr Arg Phe Gly Ile Thr Lys Ile Phe Phe Arg Ala
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Gly Gln Leu Ala Arg Ile Glu Glu Ala Arg Glu Gln Arg
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<210> 2

<211> 1016

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Whole sequence
of recombinant protein M761-2R R238 E

<220>

<223> The protein comprises as component (1) the aa
sequence of myosin II motor domain of
Dictyostelium, a three aa linker region and the
a-actinin aa sequence

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1 5 10 15

Lys Tyr Leu Lys Val Lys Gln Gly Asp Ser Asp Leu Phe Lys Leu Thr

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Val Ser Asp Lys Arg Tyr Ile Trp Tyr Asn Pro Asp Pro Lys Glu Arg
35 40 45

Asp Ser Tyr Glu Cys Gly Glu Ile Val Ser Glu Thr Ser Asp Ser Phe
50 55 60

Thr Phe Lys Thr Val Asp Gly Gln Asp Arg Gln Val Lys Lys Asp Asp
65 70 75 80

Ala Asn Gln Arg Asn Pro Ile Lys Phe Asp Gly Val Glu Asp Met Ser
85 90 95

Glu Leu Ser Tyr Leu Asn Glu Pro Ala Val Phe His Asn Leu Arg Val
100 105 110

Arg Tyr Asn Gln Asp Leu Ile Tyr Thr Tyr Ser Gly Leu Phe Leu Val
115 120 125

Ala Val Asn Pro Phe Lys Arg Ile Pro Ile Tyr Thr Gln Glu Met Val
130 135 140

Asp Ile Phe Lys Gly Arg Arg Arg Asn Glu Val Ala Pro His Ile Phe
145 150 155 160

Ala Ile Ser Asp Val Ala Tyr Arg Ser Met Leu Asp Asp Arg Gln Asn
165 170 175

Gln Ser Leu Leu Ile Thr Gly Glu Ser Gly Ala Gly Lys Thr Glu Asn
180 185 190

Thr Lys Lys Val Ile Gln Tyr Leu Ala Ser Val Ala Gly Arg Asn Gln
195 200 205

Ala Asn Gly Ser Gly Val Leu Glu Gln Gln Ile Leu Gln Ala Asn Pro
210 215 220

Ile Leu Glu Ala Phe Gly Asn Ala Lys Thr Thr Arg Asn Asn Asn Ser
225 230 235 240

Ser Arg Phe Gly Lys Phe Ile Glu Ile Gln Phe Asn Ser Ala Gly Phe
245 250 255

Ile Ser Gly Ala Ser Ile Gln Ser Tyr Leu Leu Glu Lys Ser Arg Val
260 265 270

Val Phe Gln Ser Glu Thr Glu Arg Asn Tyr His Ile Phe Tyr Gln Leu

275

280

285

Leu Ala Gly Ala Thr Ala Glu Glu Lys Lys Ala Leu His Leu Ala Gly
 290 295 300

Pro Glu Ser Phe Asn Tyr Leu Asn Gln Ser Gly Cys Val Asp Ile Lys
 305 310 315 320

Gly Val Ser Asp Ser Glu Glu Phe Lys Ile Thr Arg Gln Ala Met Asp
 325 330 335

Ile Val Gly Phe Ser Gln Glu Glu Gln Met Ser Ile Phe Lys Ile Ile
 340 345 350

Ala Gly Ile Leu His Leu Gly Asn Ile Lys Phe Glu Lys Gly Ala Gly
 355 360 365

Glu Gly Ala Val Leu Lys Asp Lys Thr Ala Leu Asn Ala Ala Ser Thr
 370 375 380

Val Phe Gly Val Asn Pro Ser Val Leu Glu Lys Ala Leu Met Glu Pro
 385 390 395 400

Arg Ile Leu Ala Gly Arg Asp Leu Val Ala Gln His Leu Asn Val Glu
 405 410 415

Lys Ser Ser Ser Ser Arg Asp Ala Leu Val Lys Ala Leu Tyr Gly Arg
 420 425 430

Leu Phe Leu Trp Leu Val Lys Lys Ile Asn Asn Val Leu Cys Gln Glu
 435 440 445

Arg Lys Ala Tyr Phe Ile Gly Val Leu Asp Ile Ser Gly Phe Glu Ile
 450 455 460

Phe Lys Val Asn Ser Phe Glu Gln Leu Cys Ile Asn Tyr Thr Asn Glu
 465 470 475 480

Lys Leu Gln Gln Phe Phe Asn His His Met Phe Lys Leu Glu Gln Glu
 485 490 495

Glu Tyr Leu Lys Glu Lys Ile Asn Trp Thr Phe Ile Asp Phe Gly Leu
 500 505 510

Asp Ser Gln Ala Thr Ile Asp Leu Ile Asp Gly Arg Gln Pro Pro Gly
 515 520 525

Ile Leu Ala Leu Leu Asp Glu Gln Ser Val Phe Pro Asn Ala Thr Asp

530 535 540
 Asn Thr Leu Ile Thr Lys Leu His Ser His Phe Ser Lys Lys Asn Ala
 545 550 555 560
 Lys Tyr Glu Glu Pro Arg Phe Ser Lys Thr Glu Phe Gly Val Thr His
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 Tyr Ala Gly Gln Val Met Tyr Glu Ile Gln Asp Trp Leu Glu Lys Asn
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 Lys Asp Pro Leu Gln Gln Asp Leu Glu Leu Cys Phe Lys Asp Ser Ser
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 Asp Asn Val Val Thr Lys Leu Phe Asn Asp Pro Asn Ile Ala Ser Arg
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 Ala Lys Lys Gly Ala Asn Phe Ile Thr Val Ala Ala Gln Tyr Lys Glu
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 Gln Leu Ala Ser Leu Met Ala Thr Leu Glu Thr Thr Asn Pro His Phe
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 Val Arg Cys Ile Ile Pro Asn Asn Lys Gln Leu Pro Ala Lys Leu Glu
 660 665 670
 Asp Lys Val Val Leu Asp Gln Leu Arg Cys Asn Gly Val Leu Glu Gly
 675 680 685
 Ile Arg Ile Thr Arg Lys Gly Phe Pro Asn Arg Ile Ile Tyr Ala Asp
 690 695 700
 Phe Val Lys Arg Tyr Tyr Leu Leu Ala Pro Asn Val Pro Arg Asp Ala
 705 710 715 720
 Glu Asp Ser Gln Lys Ala Thr Asp Ala Val Leu Lys His Leu Asn Ile
 725 730 735
 Asp Pro Glu Gln Tyr Arg Phe Gly Ile Thr Lys Ile Phe Phe Arg Ala
 740 745 750
 Gly Gln Leu Ala Arg Ile Glu Glu Ala Arg Glu Gln Arg Leu Gly Ser
 755 760 765
 Glu Gln Thr Lys Ser Asp Tyr Leu Lys Arg Ala Asn Glu Leu Val Gln
 770 775 780
 Trp Ile Asn Asp Lys Gln Ala Ser Leu Glu Ser Arg Asp Phe Gly Asp

785 790 795 800
 Ser Ile Glu Ser Val Gln Ser Phe Met Asn Ala His Lys Glu Tyr Lys
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 Lys Thr Glu Lys Pro Pro Lys Gly Gln Glu Val Ser Glu Leu Glu Ala
 820 825 830
 Ile Tyr Asn Ser Leu Gln Thr Lys Leu Arg Leu Ile Lys Arg Glu Pro
 835 840 845
 Phe Val Ala Pro Ala Gly Leu Thr Pro Asn Glu Ile Asp Ser Thr Trp
 850 855 860
 Ser Ala Leu Glu Lys Ala Glu Gln Glu His Ala Glu Ala Leu Arg Ile
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 Arg Ile Leu Lys Lys Leu Glu Asn Trp Ala Thr Thr Lys Ser Val Tyr
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 Leu Gly Ser Asn Glu Thr Gly Asp Ser Ile Thr Ala Val Gln Ala Lys
 915 920 925
 Leu Lys Asn Leu Glu Ala Phe Asp Gly Glu Cys Gln Ser Leu Glu Gly
 930 935 940
 Gln Ser Asn Ser Asp Leu Leu Ser Ile Leu Ala Gln Leu Thr Glu Leu
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 Asn Tyr Asn Gly Val Pro Glu Leu Thr Glu Arg Lys Asp Thr Phe Phe
 965 970 975
 Ala Gln Gln Trp Thr Gly Val Lys Ser Ser Ala Glu Thr Tyr Lys Asn
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<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: DNA sequence
coding for recombinant protein M761-2R R238E

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